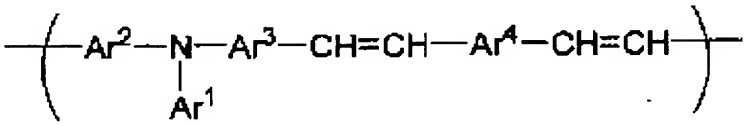
REMARKS/ARGUMENTS

Claims 1-22 are active in this application, with Claims 9-22 standing withdrawn due to the restriction requirement by the Examiner. Claim 1 has been amended to specify that the polymer of formula (I) is end-capped by an organic group. This amendment is supported by the specification at page 33, lines 6-15 and the Examples. The specification has also been amended to correct the name "benzylphosphonate diethyl" to more properly read "diethyl benzylphosphonate". No new matter is believed to be added by this amendment.

The present invention relates to a polymer having a repeating unit of formula (I):



(I)

wherein the polymer is end-capped by an organic group. Applicants have found that by endcapping the polymer with an organic group, the resulting transistors made using the present invention polymers provide significant improvements both in mobility and on/off ratio.

The claims stand rejected under 35 U.S.C. 102(b) over any one of WO 97/09394, or Chem Abstract 132:341661, 132:309300, 132:36095 or 130:73811. Applicants note that none of these references disclose or suggest the present invention polymers having an organic endcapping group. The present invention polymers specifically place an organic endcapping group at the terminus of the polymer in order to provide improved properties when used in the production of transistors. This is nowhere disclosed in the references nor is it suggested to do so in the references. The references cited by the Examiner disclose various polymers having differing repeat units. Even if the repeat units disclosed by the references were covered by the present formula (I), there is no disclosure in these references of requiring or having an organic end-capping group on the polymer.

In WO 97/09394, at the paragraph bridging pages 13-14, the reference reads:

"It can be advantageous, for regulating the molar mass during polymerization, to add monofunctional aldehydes or ketones so as to form defined end groups, for example the commercially available (from H.W. Sands, Jupeiter, Fla., USA) 4-(N,N-diphenylamino)benzaldehyde: If two mol of a monofunctional aldehyde or ketone such as 4-(N,N-diphenylamino) benzaldehyde are used together with one mol of an organophosphorus compound of the formula (III), this gives sesquimers of the formula (Ia), where the symbols and indices are as defined and preferred for the formula (I). Such compounds are likewise

suitable, in particular in admixture with the polymers of the invention, as electroluminescence materials." (figures left out)

Accordingly, while this paragraph discusses forming defined end groups using aldehydes or ketones, it does so on a compound that does not meet the present invention polymer repeating groups, and is used as an additive to the polymers of the reference, not as the polymer itself. Further, the reference uses two mol of the carbonyl containing compound, and one mol of an organophosphorous compound of formula (III) (which is a diphosphorous compound). This disclosure does not correspond with the present invention polymers, nor suggest modifying the polymers of the references to put endcapping groups on the polymers themselves. As such, this disclosure cannot anticipate or render obvious the present invention.

Applicants provide herewith a Rule 1.132 Declaration (in unexecuted form, the executed version of which will be provided to the Examiner immediately upon receipt by Applicants' representative) showing that the mere act of endcapping with an organic group provides significant differences in the performance of transistors made from the present polymers, compared to using a polymer having the same repeat unit, but no end-capping. In particular, the transistor made from the end-capped polymer of the present invention gave a mobility of 2.2×10^{-3} and an on/off ratio of 4.2×10^{4}. However, the second transistor made from the non-end-capped polymer gave a mobility of 1.4×10^{-3} and an on/off ratio of 2.3×10^{3}, each of which are significantly lower than the values obtained with the end-capped polymer. In fact, the mobility and on/off ratio of the transistor prepared with the end-capped polymer of the present invention were improved by factors of 1.6 and 18 times, respectively, when compared to the transistor formed from the non-end-capped polymer. This is important, since the polymers disclosed in the various references cited by the Examiner do not disclose end-capping of the polymers and only show non-end-capped polymers being used. The end-capping provides a significant difference in ultimate properties of the transistors being formed. Thus the presently claimed polymers are in fact different from those in the references, and the references cannot therefore anticipate the present invention. Further, even if the Examiner were to assert that these references render the present invention obvious, the results in the accompanying Rule 1.132 Declaration are sufficient to rebut such an assertion, as there is no suggestion in the cited references that by endcapping the polymer with an organic group, one would be able to provide such significant improvements to the

mobility and on/off ratio of transistors formed from the polymers, compared to using non-endcapped polymers as disclosed in the references.

Accordingly, Applicants submit that the rejection should be withdrawn.

Applicants submit that the application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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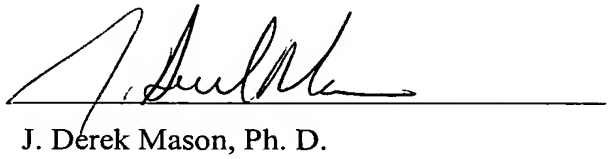

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